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TAL DICE

Dental Digest

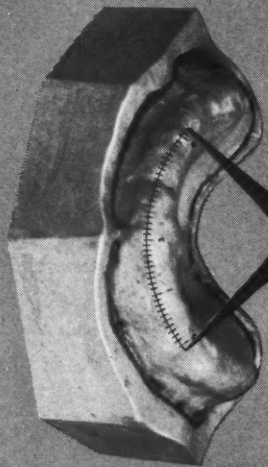
December 1950

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In the Five-Phase Co-Ordinate Size Mold System, the letters C and F describe dominantly Curved (C) and dominantly Flat (F) labial characters. The initials L, M and S, designate Long (L) Medium (M) and Short (S) sets.

Long—when length is $\frac{1}{3}$ greater than width of central.

Medium—when length is $\frac{1}{4}$ greater than width of central.

Short—when length is slightly longer than width of central.



	36 MM	39 MM	40 MM	42 MM	43 MM	45 MM	46 MM	48 MM	51 MM
L C	L36 C	L39 C		L42 C		L45 C		L48 C	L51 C
L F		L39 F		L42 F		L45 F		L48 F	
M C	M36 C	M39 C	M40 C	M42 C	M43 C	M45 C	M46 C	M48 C	M51 C
M F		M39 F	M40 F	M42 F	M43 F	M45 F	M46 F	M48 F	
S C		S39 C	S40 C	S42 C	S43 C	S45 C	S46 C	S48 C	
S F		S39 F	S40 F	S42 F	S43 F	S45 F	S46 F	S48 F	



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Dental Digest

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DECEMBER 1950**About Our****CONTRIBUTORS**

IRVING R. HARDY, D.M.D. (Tufts College Dental School, 1917) is a member of the American Board of Prosthodontics and of the faculty of Tufts College Dental School. Doctor Hardy's last article in *DIGEST* was REBASING THE MAXILLARY DENTURE which appeared in the January, 1949 issue. This month, in DEVELOPING A CORRECT OCCLUSAL PATTERN FOR A MAXILLARY DENTURE, Doctor Hardy gives step-by-step directions for a procedure which he has used with great success.

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JOHN WILLIAM GIBBS, D.D.S. (Loyola University, 1946) who specializes in periodontia, makes his first appearance in *DENTAL DIGEST* this month, presenting INSIGHTS INTO INTERPROXIMAL CARE.

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Developing a CORRECT OCCLUSAL PATTERN for a Maxillary Denture

IRVING R. HARDY, D.M.D., Boston¹

DIGEST

Developing a correct occlusal pattern for a maxillary denture opposing natural mandibular teeth presents problems not present when both maxillary and mandibular complete dentures are being made. In the latter case the operator has control of the whole occlusal scheme.

The method suggested herein deals with a particular problem but the principle employed may be applied to almost any case and will enable the operator to develop an occlusal pattern in the denture which will be in harmony with the mandibular teeth in centric and functional positions.

The technique, an adaptation of Myer's¹ method of denture construction, described by Jaffe in the July, 1946 issue of Dental Digest, differs only in its method

of application. The technique was accomplished on the processed denture rather than on a baseplate bite-block.

Figure 1

A complete maxillary denture, which was uncomfortable, occluded with a cast of mandibular natural teeth. The patient's chief complaint was that the denture seemed to shift during mastication.

The denture seemed well planned. The introduction of a deep vertical overbite, which often leads to failure, has been avoided.

Figure 2

A primary impression of the edentulous maxilla which has been mounted by means of a "mush bite" with a cast of the mandibular teeth. There are no maxillary tuberosities indicating that the denture might easily be displaced anteriorly if dislodging force were applied.

In Figure 1 dislodging forces are present in the deeply incusated bicuspid teeth. The patient can engage the locked cusps of his lower natural teeth into the denture teeth and move the denture. Many nervous people do this.

In addition, the upper second molar tooth is set in such relationship to the lower that a forward thrust is applied to the denture upon closure.

Figure 3

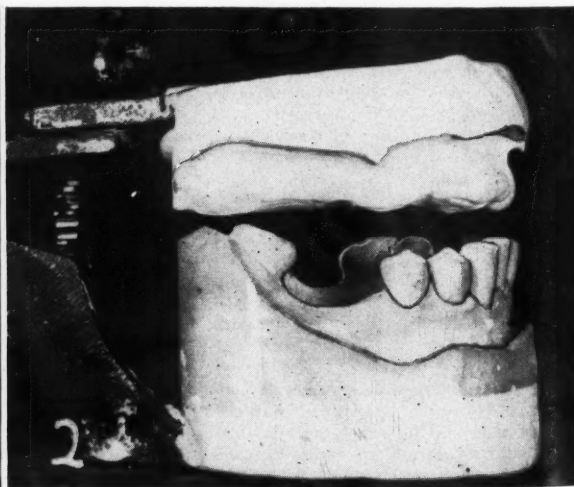
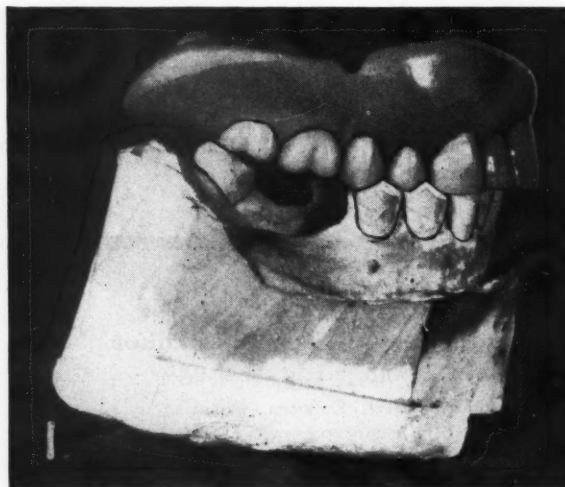
A replacement denture in process of construction. Anteroposterior intercuspation has been avoided, the bicuspid teeth being set end to end.

Figure 4

To achieve this nonlocking effect, the lower teeth on the cast were ground where necessary.

Figure 5

Grinding was done conservatively and the areas which had been ground were pencil marked for identification.



¹Myer, F. S.: Balanced and Functional Occlusion. J.A.D.A. 22:1156 (July) 1935.

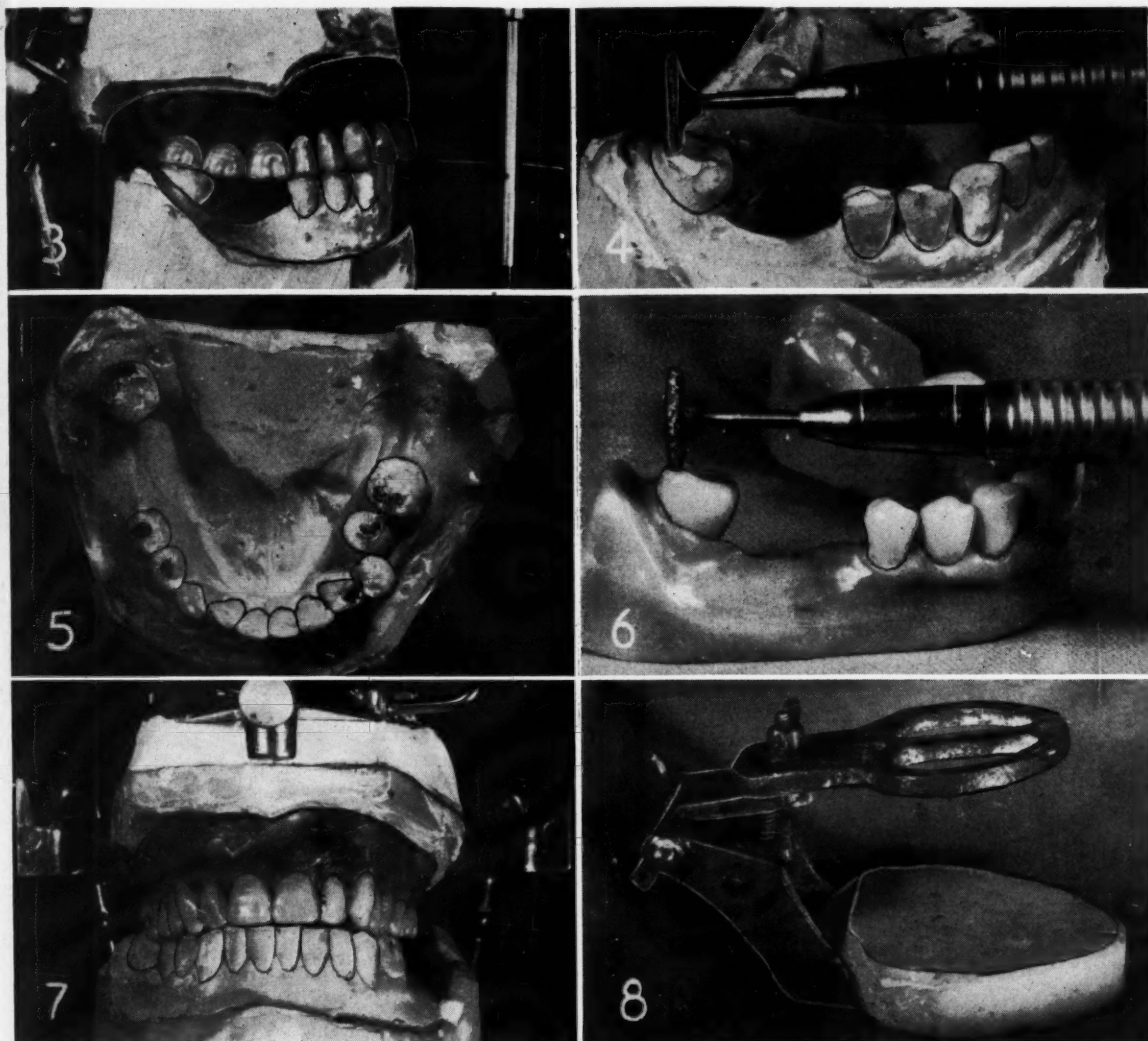


Figure 6

The teeth in the mouth were ground in the same degree. It is impossible to grind the natural teeth *exactly* as the cast has been ground, but a good approximation is all that is necessary.

In Figure 3 it will be noted that the second molar has been ground enough to flatten its distal cusps and to make the occlusal surface of the tooth nearly horizontal, thus eliminating the tendency to forward thrust.

While care was taken to avoid all anteroposterior interlocking (note how the cuspid had to be narrowed to set the bicuspids favorably), buccolingual interference was not so carefully checked. Care was taken mainly to be sure the lingual cusps of the

artificial teeth made contact with the teeth on the cast.

Figure 7

The anterior teeth were set with no vertical overbite although there is an overjet. A simple fixed condylar path articulator was used so that lateral movements roughly corresponding to the patient's could be simulated. This was done to make sure that there was clearance of the anterior teeth in lateral excursion.

The case was cured and finished.

Figure 8

A plane-line, fool proof articulator with a stone platform on which the finished denture is to be mounted. This articulator must exhibit hinge

action only; there must be no lateral play. The stone mounting block is never removed but is kept for this purpose, and for rebasing.²

Figure 9

Undercuts in the denture are filled with plasticene.

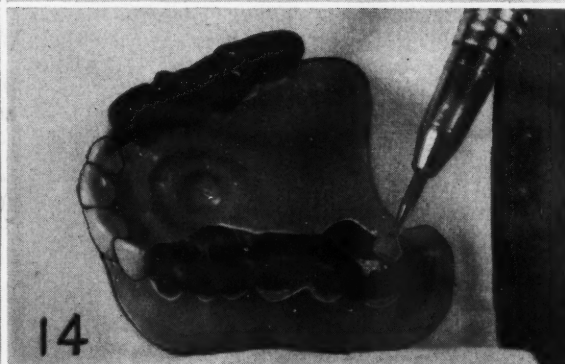
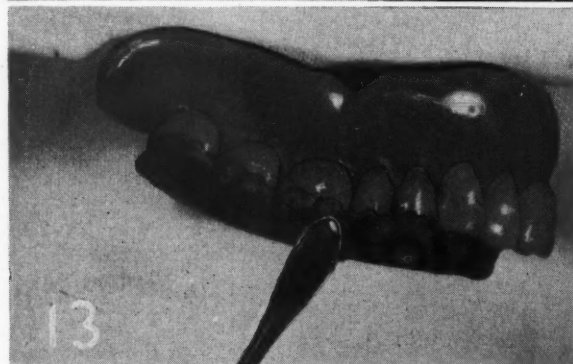
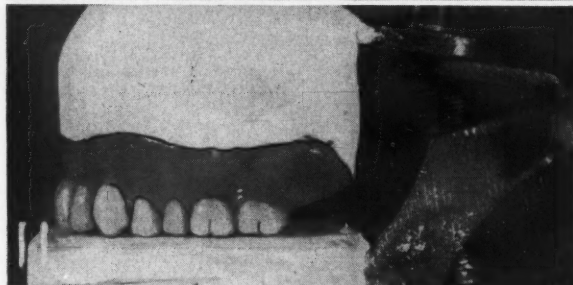
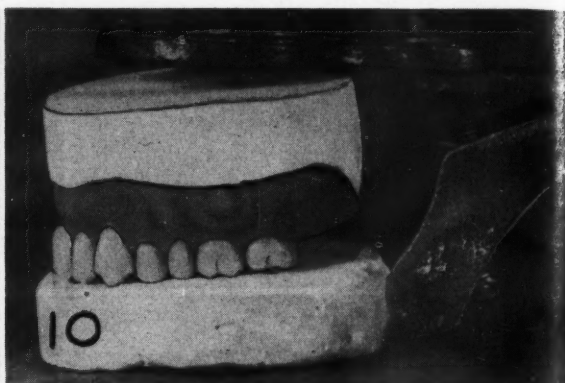
Figure 10

Plaster is poured in the denture and the denture is placed on the mounting block.

Figure 11

The case is plastered to the upper bow of the articulator. (1) The denture is removed from the mounting

²Hardy, Irving R.: Rebasing the Maxillary Denture, *DENTAL DIGEST*, 55:23-27 (January) 1949.



case, (2) the plasticene is removed, and (3) the case is cleaned and stored in water awaiting the next appointment.

After the denture has been tried in to check the fit it is removed from the mouth and carefully dried.

Figure 12

A strip of black carding wax, about 3 millimeters thick, is placed over the occlusal surfaces of the bicuspid and molar teeth.

Figure 13

The black carding wax is luted in place with a hot spatula as it must be firmly attached to the teeth to withstand dislodgement in the ensuing steps of the technique.

The case is carried to the mouth and while the operator lightly steadies the denture with thumb and finger, the patient is instructed to rub his posterior teeth together gently. He is encouraged to swing a little farther laterally than he might normally move in lateral excursion.

After a minute or two the denture is removed and the wax examined. In the wax will be carved the pattern of the lower teeth as they have moved from lateral to centric and through to the opposite lateral position.

At this time the bite is open too far. The patient is operating his jaw at too low a level due to the 3-millimeter thickness of wax present on the surface of the teeth. He is directed to continue the rubbing until

one tooth comes into contact through the wax with a natural tooth.

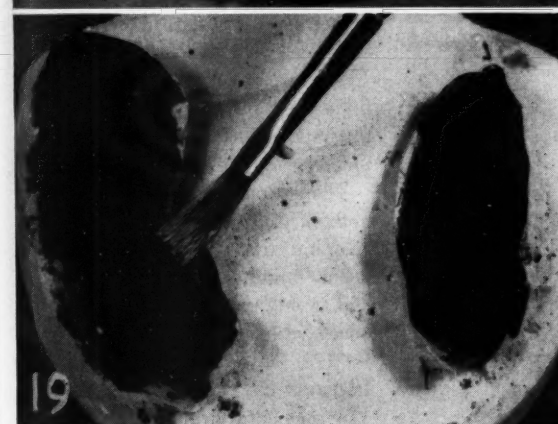
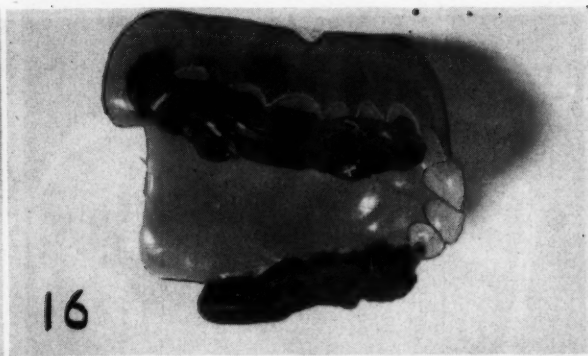
Figure 14

The wax chew-in, or rub-in showing where an upper molar (and that tooth only) has made contact with a lower natural tooth. This point is now reduced by grinding with a small stone.

Figure 15

Hot carding wax is added with a spatula over the ground area and the denture returned to the mouth. The patient is instructed to rub very lightly, for all that is required is the correction of the small amount of added wax.

As the patient has now made tooth contact, the bite is closed far enough



for an acceptable wax registration. However, the single cusp protruding through the wax interfered with producing an uninterrupted occlusal pattern. It is extremely important that the cusp be removed and the wax corrected before proceeding.

Figure 16

The completed registration.

Figure 17

The denture is returned to the articulator and heavy stone is puddled into the wax pattern, and the platform closed against the fresh stone.

The platform should be soaked with water before this step so that fresh stone will adhere to the platform.

Figure 18

Twenty minutes later the wax is warmed in hot water and stripped away from both denture and stone, leaving the occlusal pattern cut by the natural lower teeth reproduced in stone.

Figure 19

Prussian blue water color paint is smeared onto the stone pattern.

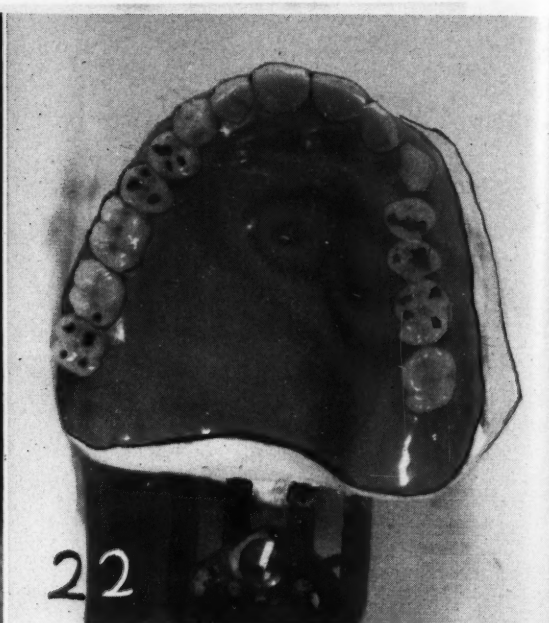
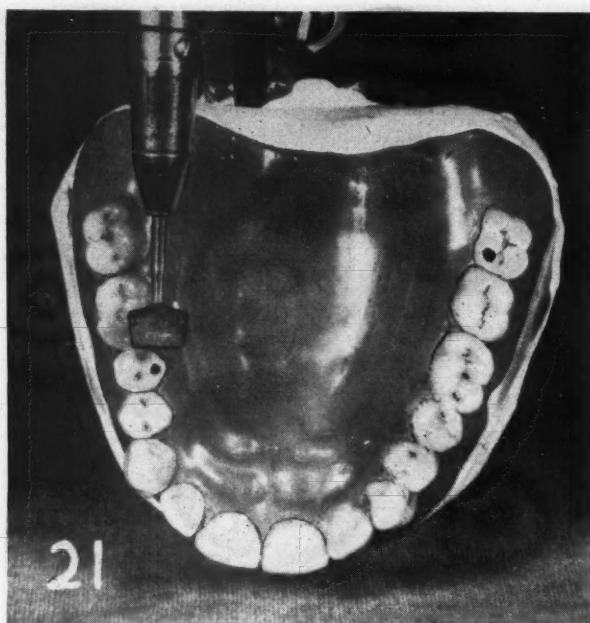
Figure 20

The articulator is gently closed.

Do not try to use articulating paper for this step. In order to produce markings with articulating paper, heavy contact of teeth to stone pattern is necessary. Heavy contact will break down the stone pattern and render it inaccurate. Use paint. A gentle closure will produce the marking. Apply fresh paint often to get good markings.

Figure 21

The result of the first closure; two spots only make contact. These are



reduced by grinding. Subsequent and repeated closures will bring more areas into contact. All marked areas are ground.

Figure 22

The markings finally appear evenly distributed. Note that there are markings on the upper first molar and only one on the distal of the second molar because the lower first molar is missing. There are no marks on the upper left second molar. It also has no opponent.

Final Steps

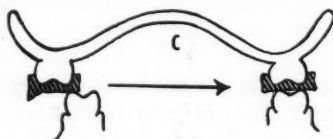
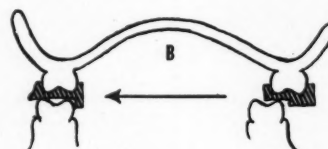
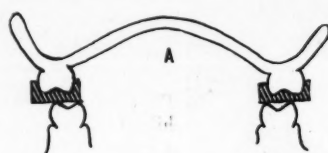
1. The denture is cleaned, the stone-ground areas polished, and the denture inserted.

2. The patient can now make lateral excursions without dislodging the denture. He has a free, unlocked occlusion.

3. The anterior teeth must be checked to be sure there is no anterior tooth interference. If there is interference it can easily be detected and corrected.

Comment

It would have been possible to place the wax over *all* the teeth rath-



23

er than only over the bicuspid and molars, thus reproducing the incisal as well as the occlusal pattern.

The writer finds that application of the wax in the manner described tends (1) to keep the denture more firmly seated during the rub-in, and

(2) to help the patient concentrate on rubbing the posterior teeth together as the posterior teeth are the only ones in contact.

Wax over the anterior teeth seems to make some patients conscious of the anterior teeth and may lead them to incise rather than chew or rub.

The entire operation consumes one hour of time: twenty minutes for developing the wax occlusal pattern, twenty minutes for the stone to set, and twenty minutes to grind in. Only one-third of this time is chair time.

Figure 23

A schematic drawing which shows (A) the unrubbed wax as originally inserted, (B) the mandible moving to one side, carving the wax as it moves, and (C) the mandible moving to the opposite side, again carving the path through the wax.

All this movement is the result of condylar guidance. There is no incisal guidance or cuspal guidance influencing this pattern for the incisors are out of contact and as soon as the first cusp makes contact, it is eliminated as shown in Figure 8.

416 Huntington Avenue
Tufts College Dental School.

Oral Prosthesis

for Young CLEFT PALATE CHILDREN

CLOYD S. HARKINS, D.D.S., Osceola Mills, Pa.,

and M. MARIA NITSCHKE, B.S., M.S., Wilkes-Barre, Pa.

DIGEST

Oral prosthesis is an acceptable method of treatment (1) to replace surgery, (2) after surgery, and (3) in conjunction with surgery for acquired and congenital cleft palate patients. It is considered a corrective rather than a preventive measure in rehabilitation, however, as it was formerly assumed that only older children and adults could tolerate artificial material within the mouth, and that young children could not tolerate the procedure of taking an impression. Consequently, prosthesis was not applied in young children and they received surgical treatment or remained untreated until they became older.

Early treatment can prevent the development of serious speech and psychosocial problems with cleft palate patients and it is more desirable to anticipate such difficulties than to correct them after they have occurred. Oral prosthesis is recommended for the nursery school child as well as for older children and adults. It has been used successfully for children as young as two and one-half years.

Procedure with the Young Child

The young patient cannot be hurried into the chair and forced to open his mouth without arousing apprehension. The play relationship aids considerably in achieving the child's cooperation.

Various techniques are employed by the prosthodontist to establish a play relationship with the child in order to decrease his fears and create a comfortable and confident situation:

1. The child handles the dental instruments including a tongue blade, mouth mirror, and impression tray.

2. The oral examination and the impression procedure become games in which the child participates. It may be necessary to have several appointments with the child before an impression can be taken.

3. In order to establish a congenial relationship it is desirable to have the young patient return a few times when little work is to be done so that he becomes accustomed to opening his mouth for examination.

4. Appointments with the child should be pleasant, casual, and brief. Eventually the impression can be tak-

en with complete willingness on the part of the young patient.

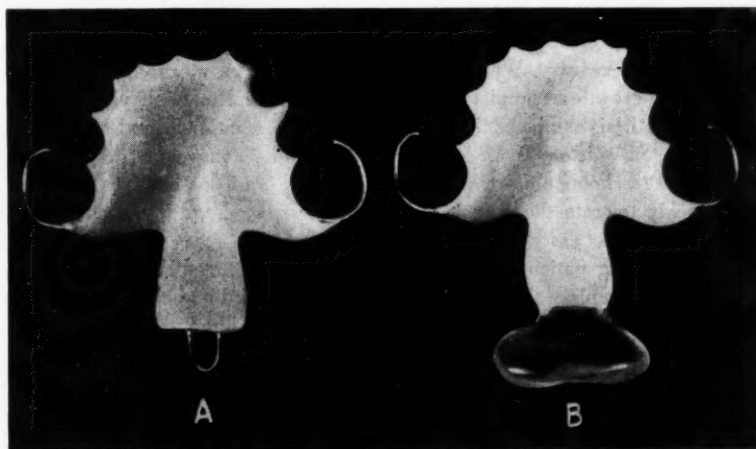
Use of a Prosthesis

1. The prosthesis, or speech aid, employed is constructed of a thin plastic material and retained by placing orthodontic bands on the molar teeth with retention points (Fig. 1A).

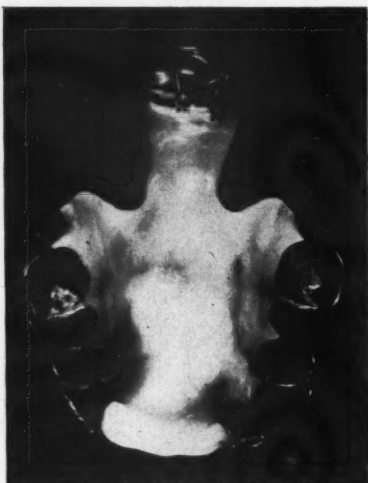
2. The prosthesis is light in weight, easily removed for cleaning, and comfortable in situ.

3. The palatal section extending to the divided uvula is worn for several weeks to develop a tolerance for the prosthesis before the pharyngeal section is added (Fig. 1B).

Function of the Speech Aid—The speech aid is completed when the pharyngeal section is attached to the palatal extension. (1) The speech aid provides protection to the delicate nasal tissue by preventing food and liquid from entering the nose and mucus from dripping into the mouth, and (2) assists in obtaining an oro-



1. Temporary speech aid. (A) Without pharyngeal section. (B) With pharyngeal section.



2A. Temporary speech aid with orthodontic wires.

2B. Temporary speech aid in position.

naso-pharyngeal closure by extending into the pharyngeal cavity where the pharyngeal muscles can come in contact with the surfaces of the prosthesis during speech and deglutition.

Adjustments in the Prosthesis—Frequent alterations in the speech aid will be necessary as the mouth and head develop and grow. These adjustments can be easily and rapidly made at intervals during the growth period.

Finger springs and loops may be attached to the speech aid to serve as an orthodontic appliance if that becomes necessary when the permanent teeth erupt (Fig. 2).

Periodic appointments are made with the child to determine the effectiveness of the prosthesis and to make alterations if necessary. When physical and oral growth is complete a permanent prosthesis can be constructed.

Method Satisfactory with Young Patients—Preschool children easily and quickly tolerate the speech aid, surpassing in most cases the tolerance of adults. Young patients learn how to remove and replace the speech aid for cleaning (Fig. 3), and are willing to wear it constantly.

Cooperation with Speech Clinician

After the child has acquired the speech aid a conference with a speech

clinician is desirable. A disc or tape recording of the child's speech at this time is essential as a record to determine the rate of progress.

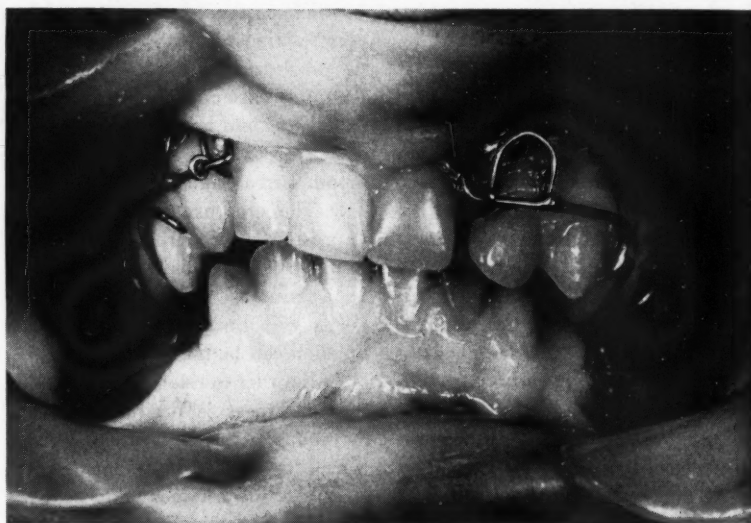
The speech clinician explains the development of normal speech to the parents and demonstrates methods to ensure proper development for the cleft palate child.

Speech Development not Forced—Parents confer with the speech clinician periodically to be certain that the child is maintaining acceptable speech for his age. Speech development is not forced but guarded

quence is considered an indication of normal speech advancement.

Progress of Development—In addition to the acquisition and mastery of sounds the child progresses through the following stages of speech attempts: (1) vocalization, (2) babbling, (3) lalling, (4) echolalia to true speech where two or more words are used to express ideas. "Milk gone" may mean to the child "I have drunk all the milk in my glass or bottle."

Later Stages—Later more words are used to express an idea and the child's speech becomes more mean-



against defective evolution. The young patient should be able to produce the following sounds with clarity and consistency at the ages denoted:

1. Three and one-half years. All vowels, p, b, m, w, and h consonants.
2. Four and one-half years. Maintain those mentioned and t, d, n, k, g, ng, and y consonants.
3. Five and one-half years. Maintain those listed and f, v, s, and z consonants.
4. Six and one-half years. Maintain those listed and ch, j, zh, l, r, wh and th (voiced and unvoiced).
5. Seven and one-half years. Maintain those mentioned and approximately 50 blends, such as bl, gr, and sw.

The development of these sounds will vary with children but the se-

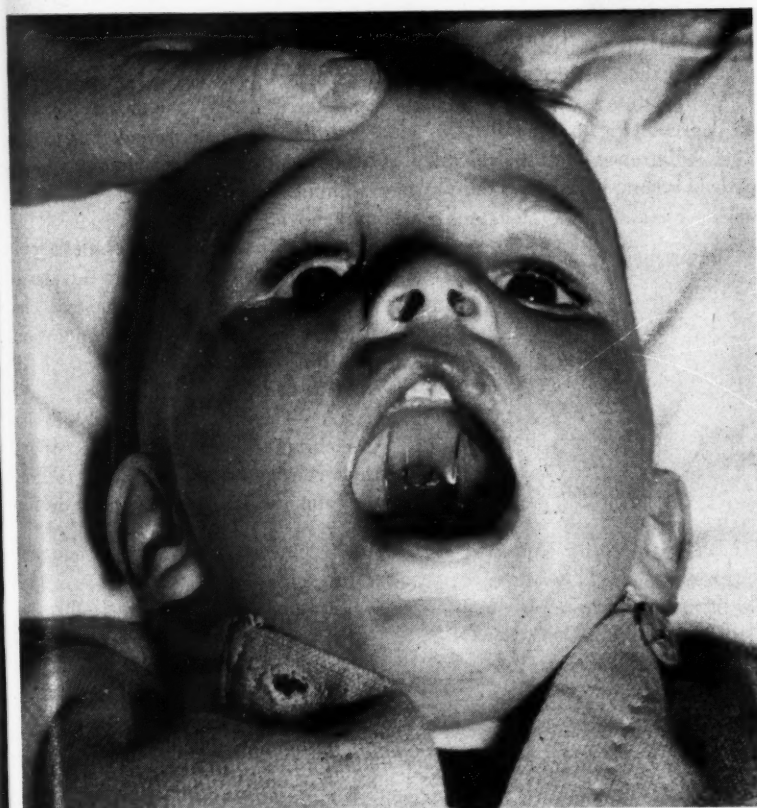
ingful to the adult. Between the ages of two and four years the child may be in the lalling, echolalia, and true speech states with most use of true speech. The vocabulary will consist of approximately 63 per cent nouns, 23 per cent verbs, and 24 per cent adjectives, adverbs, prepositions, and conjunctions.

Cooperation of the Parent—The speech clinician describes the development of speech and demonstrates methods to be used by the parents in encouraging normal development. The parents do not act in the capacity of speech clinicians, they assume only the parental role and participate as all parents do in the speech of non-cleft palate children.

In this case, however, the parents have the advantage of understanding



3A. Child, age 2½ years. Inserting speech aid.



3B. Child, age 2½ years with speech aid in position.

the underlying reasons for what they do. It is a directed program only to the extent of ensuring the development of the child's speech. Special or additional speech attention is unnecessary unless the child is not making the natural, expected advancements.

Speech Guidance an Advantage—Many young patients and their parents have not had the opportunity for the guidance of a speech clinician and yet the child has achieved acceptable speech. However, it is an advantage to have speech guidance in the preventive program and it is urgent if speech is defective or delayed.

Conclusions

1. It is desirable to construct a prosthesis for children when they are young so that it can subserve speech as the child acquires it.

2. The best speech results in cleft palate patients have been those who were provided with a speech aid in the preschool age.

3. It is possible to utilize prosthetic measures in a preventive program and their greatest value in the rehabilitation program is in this capacity.

Fulton Building.

Dental Meeting Dates

Denver Dental Society, annual meeting, Shirley-Savoy Hotel, Denver, Colorado, January 7-10.

Dallas Midwinter Clinic, Adolphus Hotel, Dallas, Texas, January 15-17.

Rhode Island State Dental Society, annual meeting, Narragansett Hotel, Providence, January 16-17.

Greater Philadelphia Dental Meeting, Bellevue-Stratford Hotel, Philadelphia, January 30-February 1.

Chicago Midwinter Meeting, Hotel Stevens, Chicago, February 5-8.

Minnesota State Dental Society, annual meeting, Radisson Hotel, St. Paul, February 19-21.

Simplifying the Removal of **MANDIBULAR THIRD MOLARS**

M. HILLEL FELDMAN, D.D.S., New York

DIGEST

The problem of the removal of mandibular third molars is usually conceded to be one of the most challenging in the field of exodontia.

Partial exposure of the crown is often deceiving and may lead the operator to make a futile attempt to remove the tooth with forceps technique alone, or with levers, without tissue preparation. A method evolved by the author for the successful removal of third molars is described herein.

Procedure

The requirements for a sound approach to the task of freeing a third molar such as that shown in the roentgenogram in Figure 1, are the following:

(A) Incision of the mucoperiosteum is made with the blade held against the distal aspect of the second molar. The line of incision extends downward and forward toward the operator to provide a base against which the flap may later be returned to its original position without sagging inward.

(B) The mucoperiosteum is reflected thoroughly, exposing the surgical zone of instrument manipulations. Small flap incisions interfere with (1) adequate visibility, (2) accessibility, and (3) surgical completion.

(C) A drill designed by the author, a flat-sided, spear-pointed blade with beveled cutting margins apically and laterally, is applied to the mesiobuccal area of the tooth at the cemental border (Fig. 2).

(D) The drill is directed into the cementum of the root of the third molar for the length of the drill blade. The angulation of the drill is about 45 degrees (Fig. 3).

(E) Entrance into the drilled bone path is accomplished with the patho-

lever, which is a tapering blade the width of the drill just used, for the elevation of the tooth. Figure 4 shows the direction of the elevating force.

(F) Care must be taken that the distal portion of the second molar is at no stage of the procedure utilized for fulcrum stress. The area against which the lever rests is the outer border of the alveolar ridge.

Specific Applications

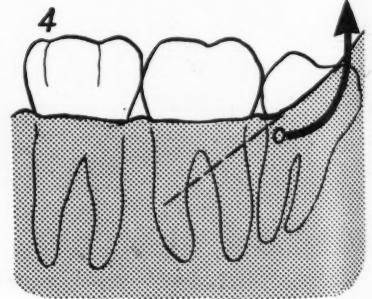
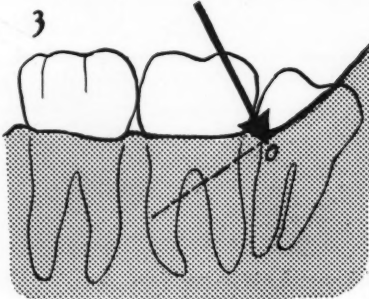
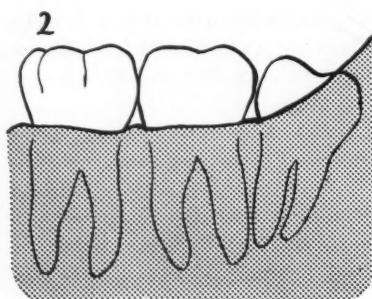
The steps outlined are applicable to molars which (1) tilt backward, and (2) have no bone shelf to interfere with uncomplicated delivery.

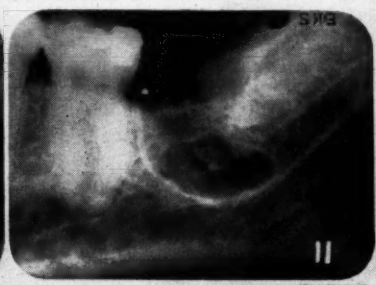
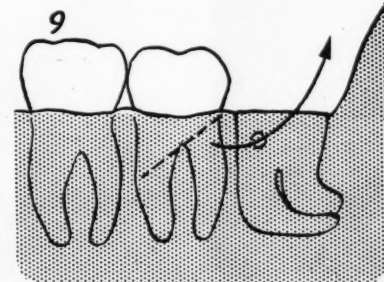
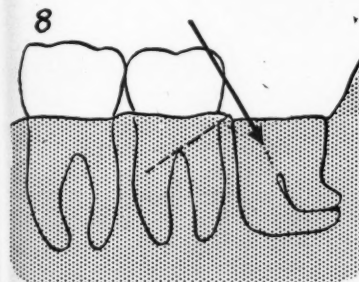
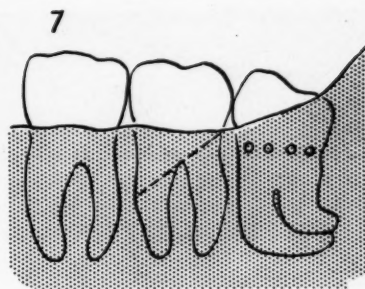
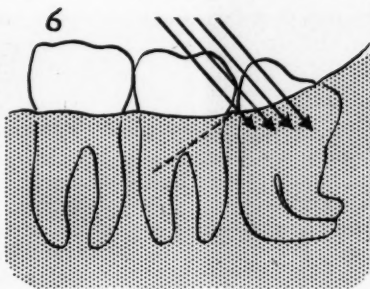
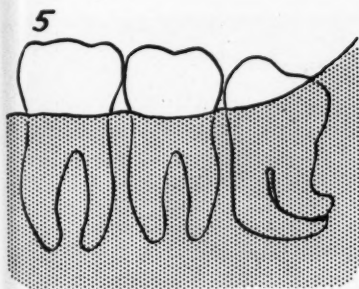
There are situations, however, when complete delivery of the tooth en masse is impossible unless (1) sectioning of the third molar is effected, or (2) considerable bone around the tooth is removed to permit freeing the tooth without sectioning it.

Technique for Sectioning

When resistance is felt to the elevating force sectioning is indicated. The successive steps for such an operation are illustrated in Figures 5, 6, 7, 8, and 9, and are the following:

(A) The drill is redirected into the cementum to effect several deep openings contiguous to each other to hollow out the tooth and weaken it for





the severing procedure which is to follow (Fig. 6).

(B) The lever may be introduced into the hollowed-out area to effect upward lifting force. The crown sec-

tion will fracture away from the root segment. The crown may be severed from the root (1) with hand chisel-mallet force, or (2) with the engine-driven mallet.

(C) After the freeing of the crown the drill is again brought into use. Another drilled path is made into the root substance along the mesiobuccal aspect. The arrow in Figure 8 indicates this procedure.

(D) The lever is now introduced into the drilled path, and the lifting of the root achieved. Should there be further resistance due to thick alveolar tissue, or root curvature, the drill may be used at various points and with varying degrees of angulation to complete the operation.

Figure 9 shows the lifting direction of the root segment of the tooth shown in Figure 10, the roentgenogram of a tooth with marked curvature of the root.

Conclusion

The author has used this technique for more than twenty-five years. He feels that its application by the practitioner interested in exodontia will materially facilitate a frequently difficult procedure.

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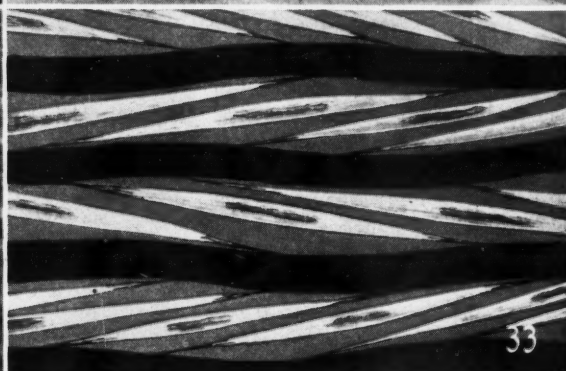
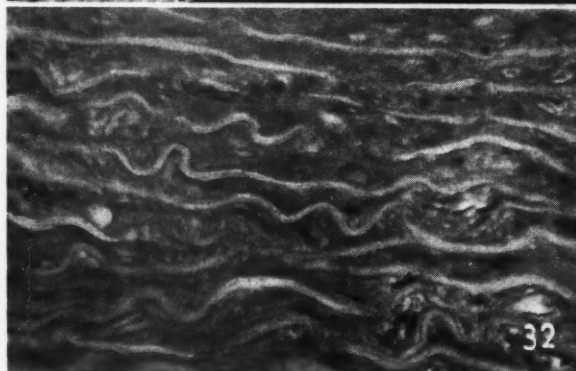
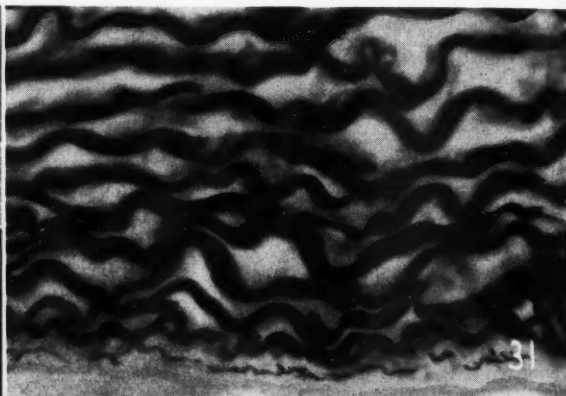
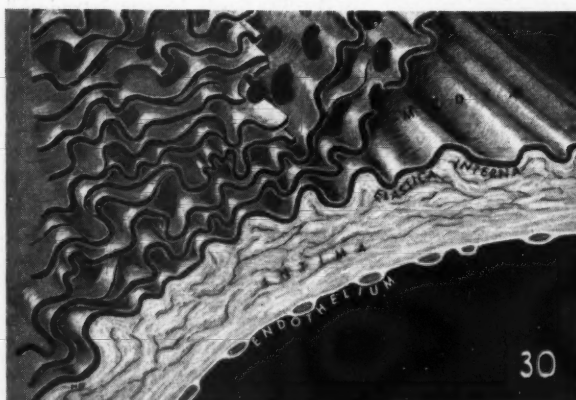
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Histology and Dynamics of

CAPILLARIES and ARTERIES

(PART THREE)

HANS ELIAS, Ph.D., Chicago



30. The tunica media of the large, conducting arteries, such as the aorta, the pulmonary, carotid and innominate arteries, is characterized by the presence of numerous, fenestrated, elastic membranes which are often connected with one another by elastic bands.

31. The elastic membranes can be stained with resorcin-fuchsin.

32. If the wall of a conducting artery is stained with hematoxylin and eosin, the muscular tissue of the media appears darker than the elastic membranes.

33. The muscle fibers of these vessels are connected with the elastic membranes by means of elastic cell tendons (Benninghoff, 1927).

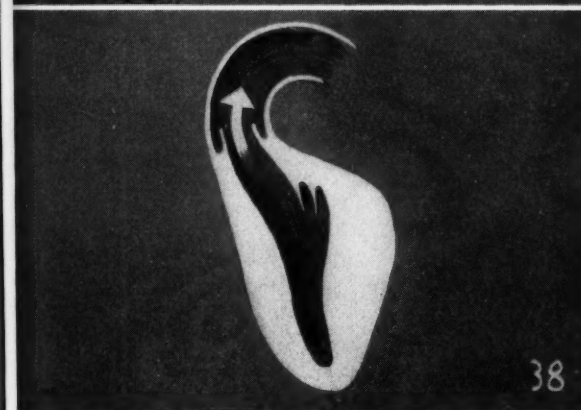
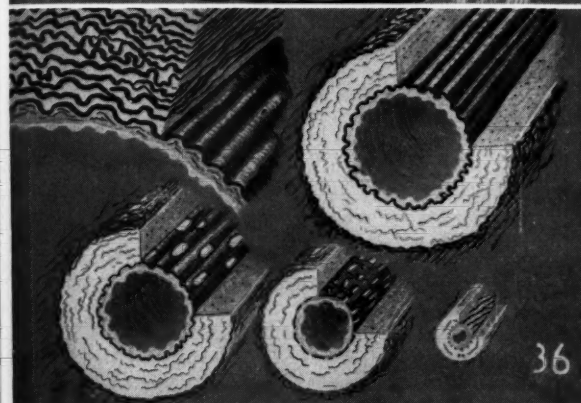
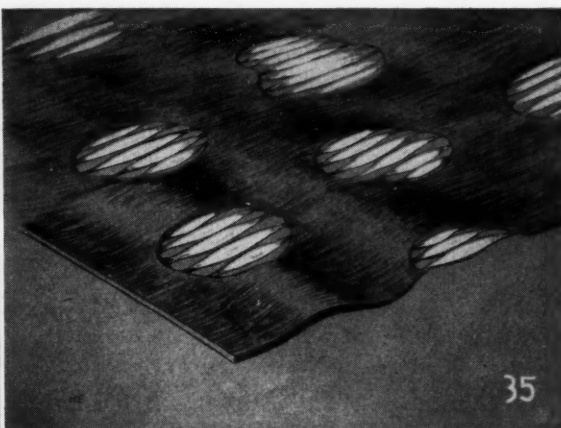
34. Contraction of the muscle fibers causes corrugation of the membranes.

35. In the ox and in the horse, muscle fibers bridge the windows of the fenestrated membranes (Benninghoff, 1927). This simplified arrangement may serve to illustrate the mutual relationship of the muscular and elastic tissue in all arteries. A slow action of the muscle fibers controls the tension of the elastic tissue. The elastic tissue

absorbs the shock of the cardiac pulsations and by its quick action re-establishes the caliber of the vessel after each systole.

The muscle fibers may also serve as amplifiers for the elastic reaction to the systolic shock.

36. The shock-absorbing elastic tissue decreases while the muscular tissue increases in relative amount in progress from the heart toward the periphery. The arteries in this picture are drawn to proportion. The aorta, pulmonary artery, the innominate, the carotid, and subclavian arteries possess



elastic membranes in their tunica media (upper left).

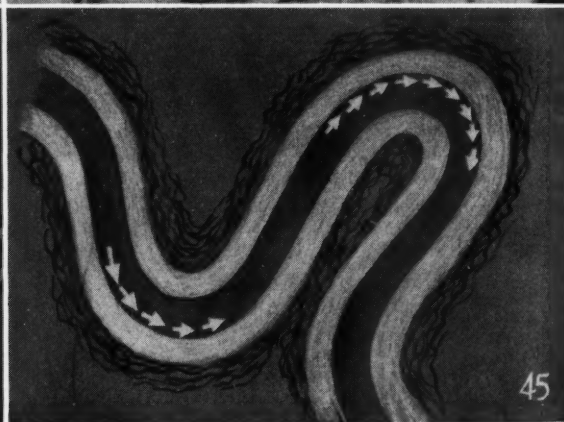
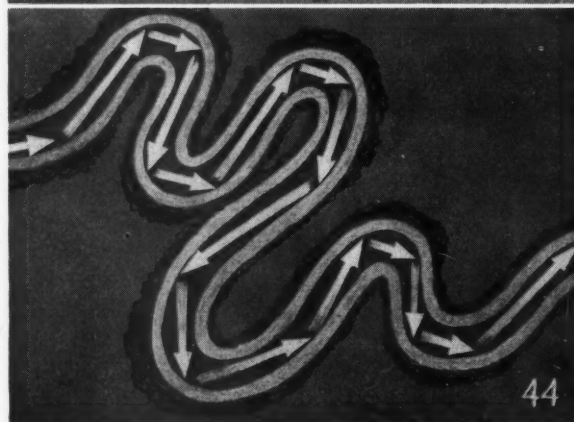
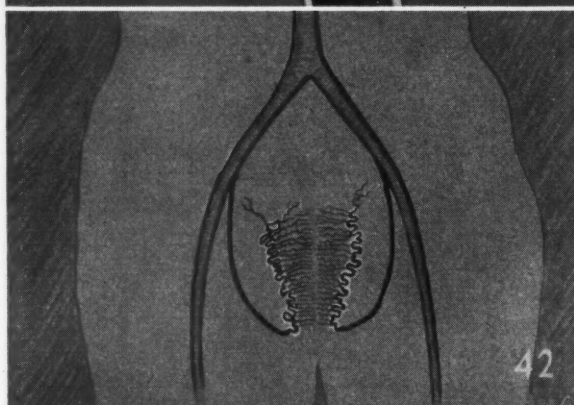
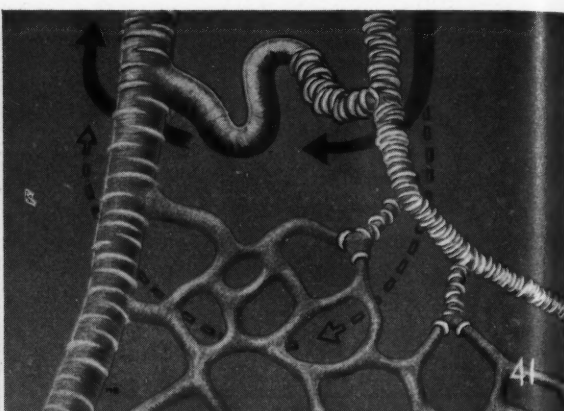
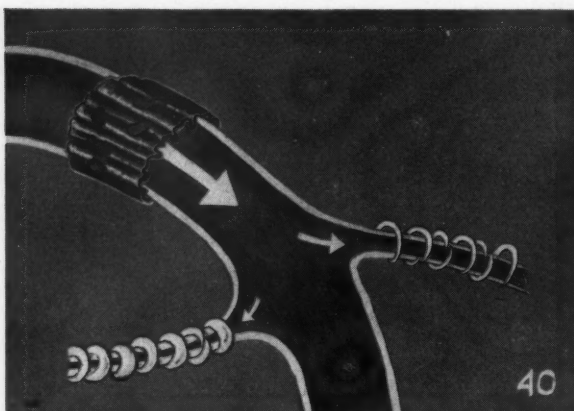
While most of these membranes are fenestrated (perforated by holes, from fenestra, a window), the internal elastic membrane is solid. The fenestrated membranes are connected with one another by means of elastic bands (Fig. 30). The muscle fibers of the media (Figs. 32, 33, and 34) are of the cardiac type in the proximal part of these vessels. Distally they are of the smooth type. The intima of the conducting arteries also contains some elastic fibers (Fig. 30). In large distributing arteries such as the iliac

artery, the elastic tissue of the media is reduced to fibers. The inner elastic membrane is still solid. With decreasing size the inner elastic membrane becomes fenestrated, dissolved into bands, and in the extremely small arteries and arterioles it is but a system of longitudinally or spirally arranged fibers, connected by an extremely thin basal membrane.

37 and 38. During diastole the main artery (aorta or pulmonary artery) is contracted; its valve is closed. Ventricular systole pushes the valve open and expands the artery. These movements can be demonstrated by

the injection of radio-opaque substances into the vascular system.

39. The kinetic energy of ventricular systole has been transformed into potential energy of the elastic membranes. Their immediate contraction tends to force the blood in a longitudinal direction. Backward flow closes the valve. Consequently, the bulk of the blood is propelled forward. Elastic contraction propels the blood to all parts of the body. The original energy for arterial blood flow is supplied by the heart and propagated through the musculoelastic tissue. The part played in this process by the smooth muscle



fibers of the arterial walls is still controversial.

40. In the distributing arteries muscular tonus controls the caliber of the arteries and therewith the amount of blood admitted to each territory. Indirectly, then, blood pressure in the proximal arteries is directly influenced by the resistance encountered by the blood in flowing through the more peripheral arteries and arterioles.

41. The amount of blood flowing through the capillary bed of a particular region can be reduced by the establishment of short circuits via arteriovenous anastomoses. The play of

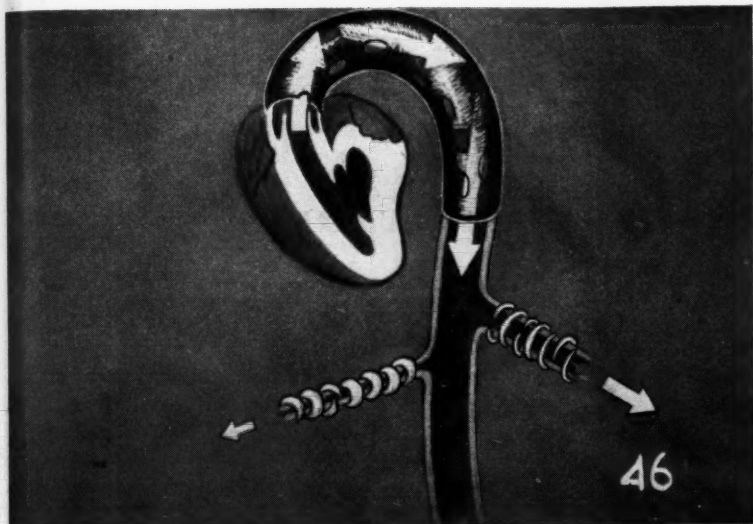
the sphincters at the entrance to the precapillaries and at the arterial side of the arteriovenous anastomoses regulates the blood supply and, in peripheral organs, the temperature of the region.

42. In some organs, especially in those which undergo periodic changes in size, as in the uterus, for example, the arteries are tortuous. Incidentally, this tortuosity is useful. When the organ expands, as the uterus does during pregnancy, the arteries are effortlessly straightened out.

43. The amount of elastic tissue in the elastica externa and in the ad-

ventitia of tortuous arteries is greatly increased.

44 and 45. From the highly elastic walls of these twisted vessels the onrushing blood is reflected around the bends much as a billiard ball is reflected by the rubber cushions at the margins of a billiard table. Thus the velocity of blood flow remains undiminished along the entire course of the artery as long as the vessel does not branch. Yet the reflections occur at infinitesimal intervals (Fig. 45). Consequently, the blood flow in tortuous arteries is just as smooth as in straight arteries.



46. Summary of essential points: 1. The heart supplies the original energy for arterial blood flow. 2. The musculoelastic tissue of the arteries propagates this energy toward the periphery and transforms the intermittent out-throw of blood into an almost con-

tinuous stream. The smooth muscle cells of the media of the arteries control their caliber and therewith the amount of blood distributed to every organ as well as the blood pressure, proximally. 4. The exchange of substances occurs in the capillary bed.

Differential Diagnosis

EARLE H. THOMAS, M.D., D.D.S., LL.B., Chicago

Taking the History

Probably the most important and most difficult art to be studied and mastered by the diagnostician is the obtaining of a competent history. If a competent history is obtained by one who has a thorough knowledge of clinical oral pathology, it will enable him to diagnose a large proportion of ailments before actually examining the patient.

In evaluating pain one must, of course, take into consideration the threshold of pain, which is the dividing line between what the patient will call a sensation of some kind and what he will term actual pain. For example, if one presses a knuckle lightly against some sensitive part of the body it will be felt as pressure. If one increases the pressure, it will finally cause what will be called pain. This threshold of pain is at a different level for the same patient at different times and it is, of course, at a different level for different patients.

In diagnosing many conditions it is important to know whether the threshold of pain is high or low. A thorough diagnostician knows by experience about where the patient's level is in relation to the average; but one can ascertain easily by pressing a blunt instrument against the tissues with enough force to cause what would be considered slight pain by the average patient. If the force causes the patient no pain, his threshold is high. If it causes extreme pain, his threshold is low. If the threshold is low, one should discount to a considerable degree any statements regarding the intensity of pain of which the patient complains.

The neurasthenic patient actually does feel pain although it is usually considered that his complaints are of mental rather than physical origin. In some cases of suspected neurasthenia, however, there is a cause for the pain, and calling these patients neurasthenics is really an admission of incompetency in diagnosis.

The malingerer is one who, for some ulterior motive, complains of symptoms which he does not have. In many cases he is suing a doctor for malpractice or trying to collect damages from an insurance company. A majority of these patients can be trapped during an examination by comparison of their responses with normal responses to various procedures. For instance, their "pain" seldom will follow normal anatomic nerve distribution. One must be cautious, however, since the normal distribution may vary to some extent.

Further examples of referred pain are given in the following case histories.

1. A man with an edentulous mouth complained of practically unbearable pressure pain in the top of his head over a period of four days. The patient felt as if a large pointed object were pressing down into his brain. There were no local symptoms in the mouth, but roentgenograms revealed a small cyst in the lower right bicuspid region. When the cyst was opened, pus spurted out. A few seconds later the pain in the top of the head was gone completely.

2. Trouble developing postoperatively in a lower molar socket in many instances will cause no local pain but will manifest as an intense earache. Such symptoms can be caused also by upper teeth. For example, a woman had an upper second molar removed under local anesthesia. While the apical region of the tooth was being detached from its adjoining tissue there was no pain in the region of the tooth, but in the ear on the same side there was excruciating pain.

3. A woman, whose complaint was extreme throbbing pain in the back of the neck, had traumatic occlusion of the left cuspids. While the lower cuspid was being ground to adjust the occlusion the patient felt as though the grinding were taking place in the back of her neck. Adjusting the occlusion did not cure the symptom, which was caused by arthritis of the neck, but it was interesting to learn about the reflex nerve connection.

From Journal of the American Dental Association 34:741-742 (June) 1947.

Insights into INTERPROXIMAL CARE

JOHN WILLIAM GIBBS, D.D.S., Charlotte, North Carolina

DIGEST

The importance of the application of scientific knowledge to the care of the interproximal spaces of the adult teeth is not sufficiently emphasized in dental literature. Periodontists are aware of this aspect of treatment but the average general practitioner is frequently not appreciative of its importance.

It is established that infections originating in the interproximal spaces often lead (1) to the loss of caries-free teeth, and (2) to more serious local and general disturbances.

In this article are concisely presented a number of facts that will aid in the prevention and control of oral sepsis.

Composition of the Mucous Membrane

The mucous membrane, covering the alveolar process and interdigitating between the teeth, is composed of stratified squamous epithelium of the mucous type and is a barrier against injurious agents.

Its development is as follows:

1. The layer of cells resting on the basement membrane are short columnar or cuboidal in shape. 2. The cells change in shape under the pressure of continually forming new cells, from cuboidal to polyhedral, and finally to squamous shape as they rise to the surface.

The Formation of Keratin—1. The cells degenerate as they rise, undergoing fragmentation to form a dense horny mass of keratin.

2. Keratin, the physiologic end of the original basal cells, forms a cuticular border on the surface of the epithelium and makes the first barrier against microbic invaders much stronger.

Healthy Tissue a Requirement—1. Proper keratin formation from basal cells can take place only in the presence of healthy stimulated tissue.

2. In (1) congested, (2) irritated, or (3) poorly nourished tissue, the cells undergo premature degeneration and keratin fails to form the cuticular border.

Functions of Keratin—It is difficult for an injurious agent such as trauma, thermal change, chemical action, or a microbe to penetrate a relatively thick wall of the keratinous mass which acts as (1) a shock absorber, (2) insulator, and (3) sealing medium as well as a direct nonvital barrier to viable organisms.

Protective Manifestations of the Epithelium

The callouses on the hands of the brick mason, the tennis player, and on the soles of the feet of a barefoot boy are extreme examples of the cuticular border thrown up by the epithelium.

Penetration Difficult—It is almost impossible for tough masses of callus to be penetrated by any microbe, even the powerful tissue invader, the spirochete of syphilis.

Within limits the application of heat, trauma, organisms, or caustic acid will cause little change for the function of these callouses is protection against such agents.

The application of traumatic, thermal, caustic, or bacterial agents in equal amounts to uncalledous epithelium will result in severe reaction.

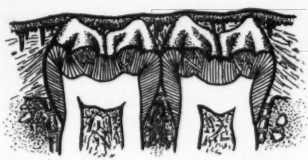
Preparation of Tissue—A tissue must be prepared properly to withstand the normal actions of forces at work in its environment, and the mouth is subject to (1) traumatic forces, (2) thermal changes, (3) chemical action, and (4) invasion of ever-present organisms.

Production of Cuticular Border on the Gingival Margins—Epithelial callus of the palms of the hands or soles of the feet is induced by friction. A protective cuticular border on the gingival margin can also be produced by friction which is applied in two ways: 1. By passage of coarse foods over the gingivae during mastication and the movement of tongue and lips almost constantly during waking hours.

2. By the application of artificial cleansing devices. The most commonly used device is the toothbrush.

Interproximal Spaces Neglected—1. In the majority of people natural and applied friction includes the greater part of the mucous membrane. But the sheltered, highly vulnerable epithelium of the interproximal spaces usually receives no natural or applied friction along its entire surface.

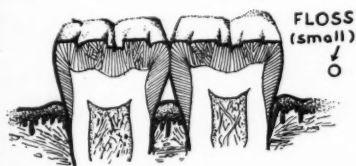
A Variety of Lesions Encountered—It is here, in the interproximal spaces, that the dentist encounters (1) the most difficult carious lesions, (2) incipient and acute Vincent's infections, (3) hemorrhagic granulations, (4) nonspecific gingivitis, (5) masses of calculi, (6) congested tissue, (7) malodors, (8) accumulations of necrotic cells and putrescent matter, (9) bone crest resorption, and (10) supuration.



(1)



(2)



(3)



(4)

1. Stages of tooth eruption (Gottlieb). (1) Erupting tooth. (2) Interproximal space nonexistent (average age, 12-19 years). (3) Interproximal space exists. The use of small dental floss is prescribed (average age 19-28 years). (4) Large definite spaces can be readily probed. Tape prescribed (average age 30-40 years).

Dental literature abounds with operative techniques, crown and bridge construction techniques, prosthetic methods, and oral surgery procedures, but the problem of the lesions to which the interproximal spaces is subject has been inadequately discussed.

An Important Adjunct to Oral Hygiene—It has been demonstrated that friction applied to the interproximal spaces will serve to prevent or decrease the severity of gingival disease.

Procedure

1. The instrument of choice may be used: (1) toothpick, (2) stimulant, (3) floss, (4) tape, (5) denticator. Stimulation should be thorough but should not cause irritation.

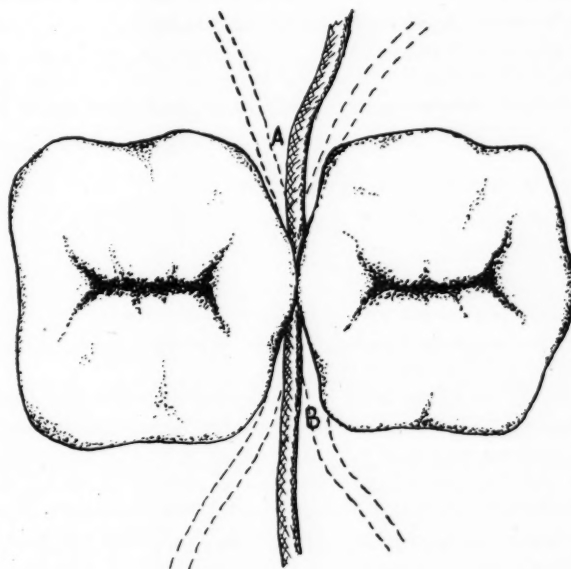
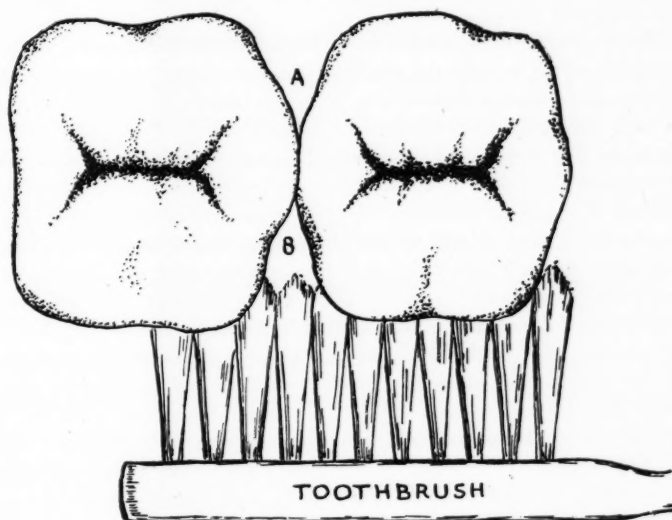
Proof of Satisfactory Stimulation—

1. Friction applied to healthy epithelium will produce keratin formation.

2. Properly keratinized epithelium does not bleed under moderate pressure.

3. Absence of hemorrhage during stimulation by the patient usually determines the proper effect of the rubbing procedure.

4. Absence of hemorrhage during controlled, firm, blunt probing by the



2. Occlusal view showing limitation of toothbrush cleaning interproximally even under well-directed pressure. A-B is untouched. Interproximal tooth surface and interproximal epithelium are not cleaned and stimulated.

Occlusal view showing area A-B. Both tooth surface and gingival margin are cleaned and stimulated by supplemental use of dental floss.

dentist is indicative of healthy, tough, interproximal tissue.

5. Bleeding under moderate pressure denotes epithelial ulceration with embryonic granulation tissue present.

Use of Dental Floss—1. The most effective method for cleansing and massaging the gingival margins interproximally is probably dental floss or tape. Because it is flexible it may be bent to conform to the curvature of the tooth and margin.

2. Many dentists and patients believe that floss will lacerate the gingival tissue and dislodge restorations. Floss will lacerate even extremely tough tissue if it is snapped through tight contacts onto the gingiva. A restoration that can be dislodged by a thin waxed thread should be dislodged and adequate retention and correct margins attained.

Treatment is Individual—Inasmuch as all mouths differ in the following ways: (1) the number of teeth present, (2) the absence or presence of third molars, (3) teeth standing alone, (4) bridges, (5) partial dentures, and (6) crowded or malposed teeth, the practitioner should instruct each patient in selecting the frictionizing instrument and the plan of treatment best suited to him.

General Instructions—1. The patient should be told to start and finish each time at the same points so that the procedure follows the pattern of

a conditioned reflex, (1) automatically applying the proper amount of pressure, and (2) bending the floss at the proper angle in just the right place.

2. The patient should be instructed to follow the technique at a time when he will not be hurried.

3. It should be impressed on the patient that if this is his last procedure before retiring, his mouth will always be clean one-third of the time.

Contraindications

1. Interdental stimulation cannot be empirically prescribed or promiscuously used. A definite diagnosis should be made prior to prescription.

2. Interdental prophylaxis cannot be accomplished when there is no interdental space. In this situation epithelial attachment may be traumatized in a vain effort to carry out the dentist's instructions.

(Interdental spaces appear at different ages and in different areas of the same mouth at different ages. Some thirteen-year olds have definite spaces while some thirty-year old people have no spaces. Usually the spaces may be demonstrated at the end of adolescence. A history of persistent bleeding of healthy gingival tissue on brushing the teeth is indicative of developing spaces).

3. Irritation is produced rather than stimulation when friction is prescribed for calculi-filled spaces. Stim-

ulating action depresses the ulcerated tissue against the sharp deposits. There must be no foreign matter in the spaces when the friction is performed.

4. When friction is used over the lips of periodontal pockets filled with granulations, irritated tissue is further inflamed. The massage should be on connective repair tissue or healthy epithelium. The area must be allowed to fill in with epithelium before results can be expected.

5. A diabetic ulcer, a syphilitic lesion, or tissue weakened by (1) anemia, (2) blood dyscrasia, or (3) avitaminosis cannot be frictionized. These conditions must be corrected before local measures can be instituted.

Summary

1. All gingival margins must be kept clean and stimulated for oral health.

2. This paper does not include the care of the buccal, labial, and lingual margins for it is believed that any good brushing technique will be sufficient for these areas. All patients should be taught, not told, how to brush their teeth.

3. The rule that all margins must be kept stimulated must be followed even if correction in fixed prosthesis must be made to facilitate stimulation.

801 Liberty Life Building.

Teething

TEETHING may be a physiologic process but, as the late Sir Frederic Still used to remark, so is labor, and yet it may be painful and associated with various disorders.

The pain of teething may lead to (1) restlessness and sleeplessness, and (2) in the child otherwise predisposed (potentially epileptic, rickety, with low blood calcium) to convulsions. The local reaction resulting in a stomatitis may spread and result in

a pharyngitis, otitis media, cervical adenitis, bronchitis, and even pneumonia.

Absorption of toxins may result in a parenteral "diarrhea and vomiting" disturbance. A rash of the lichen urticaria type may be attributed to the same cause. The pain and tenderness also produce a dislike for food and therefore to loss of appetite and weight.

The healthy baby is much less like-

ly to be upset by teething than the weakly infant; it is difficult, therefore, to differentiate between ailments directly attributable to teething and those due to associated conditions at the teething age when feeding changes are in progress.

From Medical News, British Medical Journal No. 4686:1013 (Oct. 28) 1950.

The EDITOR'S Page

THE SOFT tissues of the mouth are among the most sensitive indexes of deficiency in vitamin C. Sub-clinical scurvy may show itself in gingivitis before the condition is observable in any other tissue. Many cases of transient and chronic gingivitis may represent vitamin C deficiency.

King¹ and Youmans² in separate articles in the *Journal of the American Medical Association* have made evaluations of the present knowledge of vitamin C. They have observed that a deficiency of vitamin C produces impairment in health in the following ways: Altered tooth and bone structures; slow healing of wounds; decreased capillary strength; decreased capacity to combat infections; edema and redness of the gums; tenderness to touch; irritability; loss of appetite and weight; muscular weakness; anemia; skin lesions.

The gum lesions are characterized by gingival swelling, tenderness, bleeding, and hyperemia. Subsequent to swelling there may be characteristic atrophy with resultant retraction of the gingiva. Secondary infection superimposed upon the inflamed soft tissue is common.

The inflammatory and hemorrhagic gum tissue is an expression, according to Youmans, of "disturbance in the formation and maintenance of the intercellular ground substance. Apparently ascorbic acid is essential for the integrity of this tissue. In the intercellular ground substance are the collagen bundles. In the absence of a sufficient supply of ascorbic acid, the collagen bundles disappear and the ground substance takes on a thin, 'watery' appearance and may eventually disappear. If ground substance is laid down, it is imperfect; collagen bundles and fibers are scarce or lacking. If the

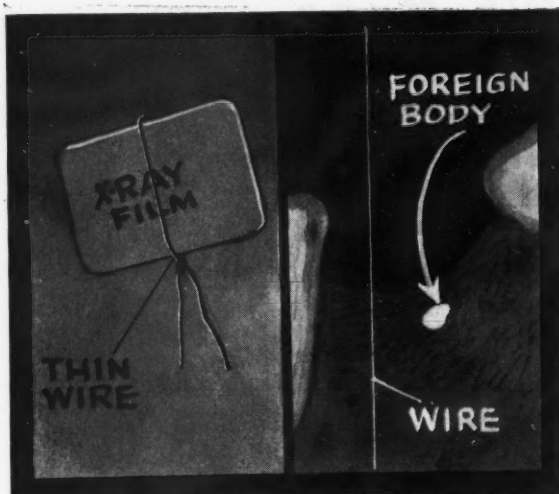
deficiency is severe, no ground substance is formed. Conversely, when adequate amounts of ascorbic acid are supplied, normal collagen and ground substances are laid down. Inasmuch as this ground substance is the essential matrix of connective tissue, the defect, simply expressed, is a lack of proper connective tissue, and, since connective tissue constitutes the effective framework tissue of all organs and structures, a defect in this tissue will explain the multiple, widespread and varied lesions of scurvy. The defect in the so-called cement substances of the capillaries, a lesion responsible for the various hemorrhagic manifestations, can be considered in the same category."

The futility of treating some cases of gingivitis and periodontitis by local methods alone should be apparent. If the inflammatory condition of the soft dental tissue is the result of vitamin C deficiency no amount of medication, scaling, massage, surgery, or occlusal equilibration will correct the underlying condition. In the treatment of these lesions it is necessary to have the biologic point of view and treat the whole organism rather than treat the local parts.

The average minimum daily requirement of vitamin C for adults is 75 milligrams. This amount may be supplied from natural food sources such as citrus fruit juices or from chemical preparations. In cases of gingivitis it is often advisable to prescribe 200 milligrams of the chemical preparation a day in addition to the vitamin C supplied from natural foods. There are no toxic effects that result from this form of therapy as excessive amounts of vitamin C are promptly excreted. Dentists will use good judgment if they supplement their local forms of treatment for gingivitis by writing prescriptions for 200 milligrams of ascorbic acid that the patient may take each day.

¹King, Charles Glen: Vitamin C, J.A.M.A. 14:563-565 (February) 1950.
²Youmans, John B.: Deficiencies of the Water-soluble Vitamins, J.A.M.A. 144:389 (September) 1950.

1



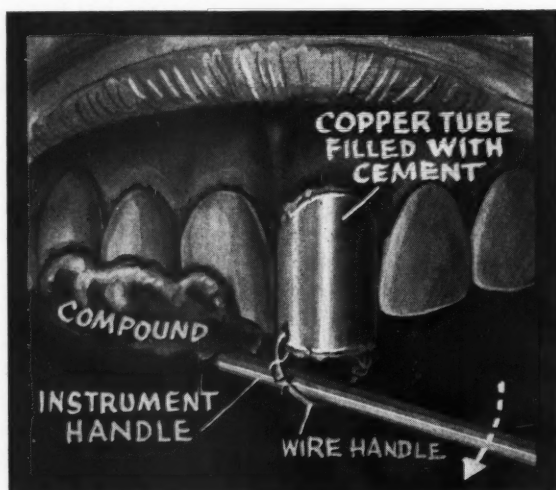
Clinical and Laboratory

Locating Foreign Bodies in the Alveolus

Matthew N. Leary, D.D.S., Wilmington, N. C.

1. Pass a loop of fine wire around a dental film. Locate this wire near an easily discernible anatomic landmark. Make the exposure in the usual way. The distance of the foreign body from the wire loop in the picture marks its location in the mouth relatively easily.

2

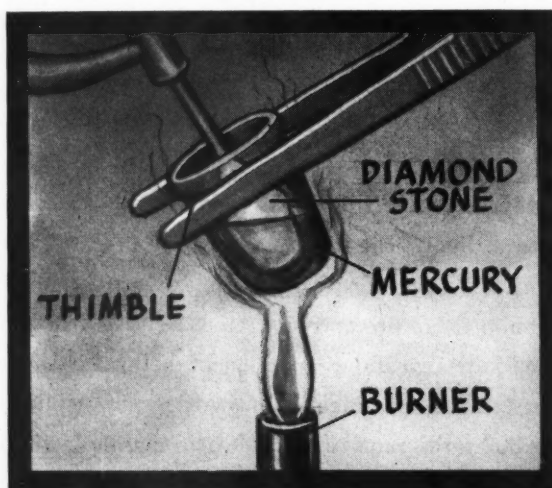


Removing a Porcelain Jacket Crown Intact

Samuel Silver, D.D.S., Chicago

2. Select a copper tube which fits loosely around the jacket crown and contour to fit under the free gum margin. Punch two holes in the incisal end of the tube and make a wire handle. Fill the copper tube with cement and place it over the jacket crown. Use compound over the occlusal edges of the adjoining teeth for protection and with the handle of any steel instrument as a lever, exert force to lift the crown off the preparation. The thinner cement under the crown will give way first and the jacket will come off the tooth intact.

3



Removing Amalgam From Diamond Stones

Morton Parmet, D.D.S., Allentown, Pa.

3. To clean amalgam grindings from a clogged diamond stone, heat some mercury in a metal thimble and revolve the stone in the hot mercury until all the amalgam has been removed.

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SUGGESTIONS . . .

A Plastic Coating for Impression Trays

A. David Smith, D.D.S., Akron, Ohio

4. Select a wide mouthed jar large enough to accommodate an impression tray. Fill at least half the jar with chloroform. Add clear acrylic powder in an amount sufficient to be dissolved in the chloroform. This is a slow process. Dip a clean impression tray in this chloroform-acrylic preparation. Remove the tray and hang it up to dry. The acrylic coating on the tray will give a clean and neat appearance.

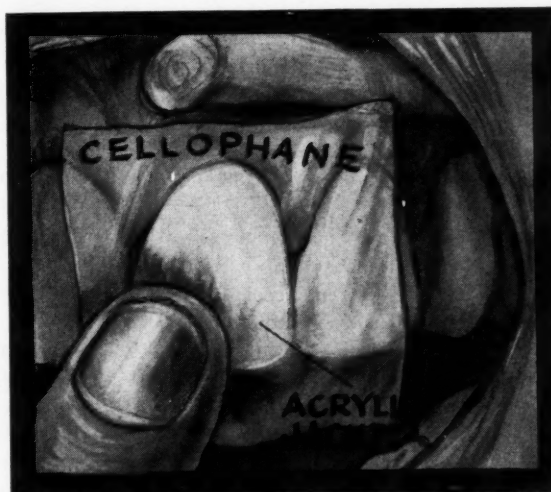


4

Putting a Final Glaze on an Acrylic Jacket

Joseph E. Spiezio, D.D.S., South Orange, N.J.

5. After an acrylic jacket crown has been cemented, create surface markings as desired. Place a drop of acrylic liquid on the jacket, press a cellophane sheet over the crown, and hold with finger pressure for five minutes. When the cellophane is removed the acrylic jacket has a rich glaze.

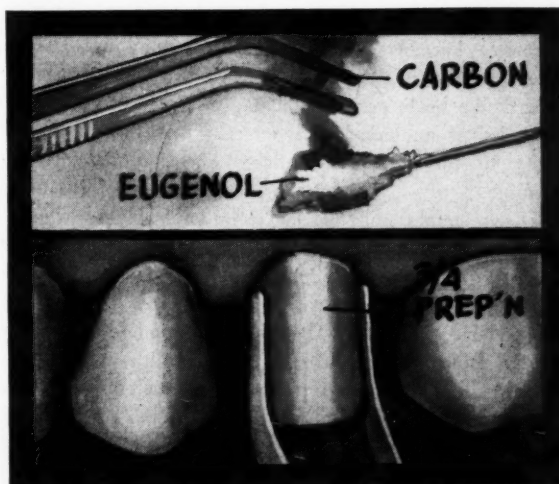


5

Obtaining Parallel Grooves on a Three-quarter Preparation

Lt. (jg) Paul Biedlingmaier, (DC), Portsmouth, Va.

6. Saturate a cotton swab with eugenol and ignite. Touch the beaks of a pair of cotton pliers to the carbon on the cotton swab. Squeeze the beaks of the pliers on the proximal surfaces of the preparation. The carbon marks indicate the position of the parallel grooves.



6

technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time. Turn to page 554 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.



Smoking for the Cardiac Patient

The important ingredient of tobacco smoke with respect to its action on the cardiovascular system is nicotine. Other toxic constituents, such as the pyridine bases, hydrocyanic acid, and ammonia, are present in such small amounts that they exert no appreciable effects. The concentration of carbon monoxide in the blood after smoking except in extreme instances, does not reach sufficiently high levels to embarrass the circulation at ordinary altitudes.

The average American cigarette contains about 20 milligrams of nicotine by weight. When a cigarette is puffed to butt length in the ordinary way, 22 per cent of the "mainstream" smoke, approximately 3 milligrams of nicotine, is drawn into the mouth. (1) The noninhaler absorbs from 67 to 77 per cent, and (2) the inhaler absorbs from 88 to 98 per cent into the blood stream through the mucous membranes of the respiratory tract.

Assuming 95 per cent absorption by inhalers, about 2.85 milligrams of nicotine are taken into the body from the smoke of one regular cigarette. In the case of low-nicotine cigarettes, approximately 0.32 milligrams are absorbed.

For general purposes, the acceleration of the heart rate is the most sensitive index of effect and differentiation between persons. It is stated that after the smoke of one regular cigarette has been inhaled, an increase of heart rate of more than twenty-five beats per minute may be regarded as an index of hypersensitivity to the immediate effects of nicotine.

Three factors must be taken into account when deciding whether smoking cigarettes is immediately harmful to the patient with cardiac disease. These are: (1) The effect on the work of the heart, (2) the action on the coronary circulation, and (3) the individual susceptibility.

In the large majority of patients, nicotine apparently does not increase

MEDICINE

and the Biologic Sciences



the work of the heart. Average increase in arterial pressure from smoking is approximately 15 per cent. This is no greater than that caused by any mild physical effort or a slight emotional experience.

The coronary circulation is affected only slightly, if at all, by nicotine. Cardiac pain is seldom induced even in those with known coronary heart disease. In the susceptible persons with diseased coronary vessels and a diminished reserve in the coronary bed, smoking does appear to cause these arteries to constrict.

There is a wide range of variation in susceptibility to the effects of smoking. The vast majority of both men and women smoke with an apparent freedom from discomfort and with enjoyment.

Moderation in smoking is recommended for the cardiac patient. The instances where smoking is forbidden are (1) acute stages of cardiac infarction, (2) congestive heart failure, (3) active rheumatic carditis, and (4) hyperthyroidism. No patient with peripheral vascular disease, such as (1) thromboangitis obliterans, (2) Raynaud's disease, or (3) intermittent claudication due to arteriosclerosis should use tobacco. This

is so because of the known constricting action on the peripheral circulation.

Similar conclusions apply to the smoking of cigars and pipes. However, the difference is a quantitative one as persons absorb less from smoking cigars and pipes than from smoking cigarettes.

Levy, Robert L.: *Smoking for the Cardiac Patient*, *M. Clin. North America* 34:697-703 (May) 1950.



Mineral Content of Bone

An ingenious method of estimating the mineral content of bone with roentgen rays has recently been reported. The method is based upon the comparison between the absorption of roentgen rays in a bone of the patient and the absorption in a phantom placed over this bone. A roentgenographic film records the transmission of roentgen rays within the shadows and a densitometer is used to measure the film densities.

The results obtained closely parallel the results obtained in practice by other methods. To be able to determine the mineral content of bone is of value for two reasons: (1) The absolute determination of the mineral content makes possible a comparison of the value with corresponding normal values, and (2) the comparison of successive determinations in the same patient makes it possible to follow the progress of the bone changes.

The potential success of the procedure lies in the fact that adult bone is a living tissue with a mineral content which fluctuates under the influence of endocrine and enzyme activity. The trabeculae of the bone constitute a calcium store which is available for maintenance of the calcium requirements of other tissues when the ingested supply is insufficient. The ratio of calcium to phosphorus remains essentially constant.

Even in health the mineral content may fluctuate. However, in certain cases of endocrine imbalance, such as hyperparathyroidism, the fluctuation may be great.

(Continued on page 548)

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The procedure promises to be an important adjunct in the differential diagnosis of many endocrine imbalances and their related conditions.

Henny, G. C.: *Roentgenographic Estimation of Mineral Content of Bone*, *Radiology* 54:202-210 (February) 1950.

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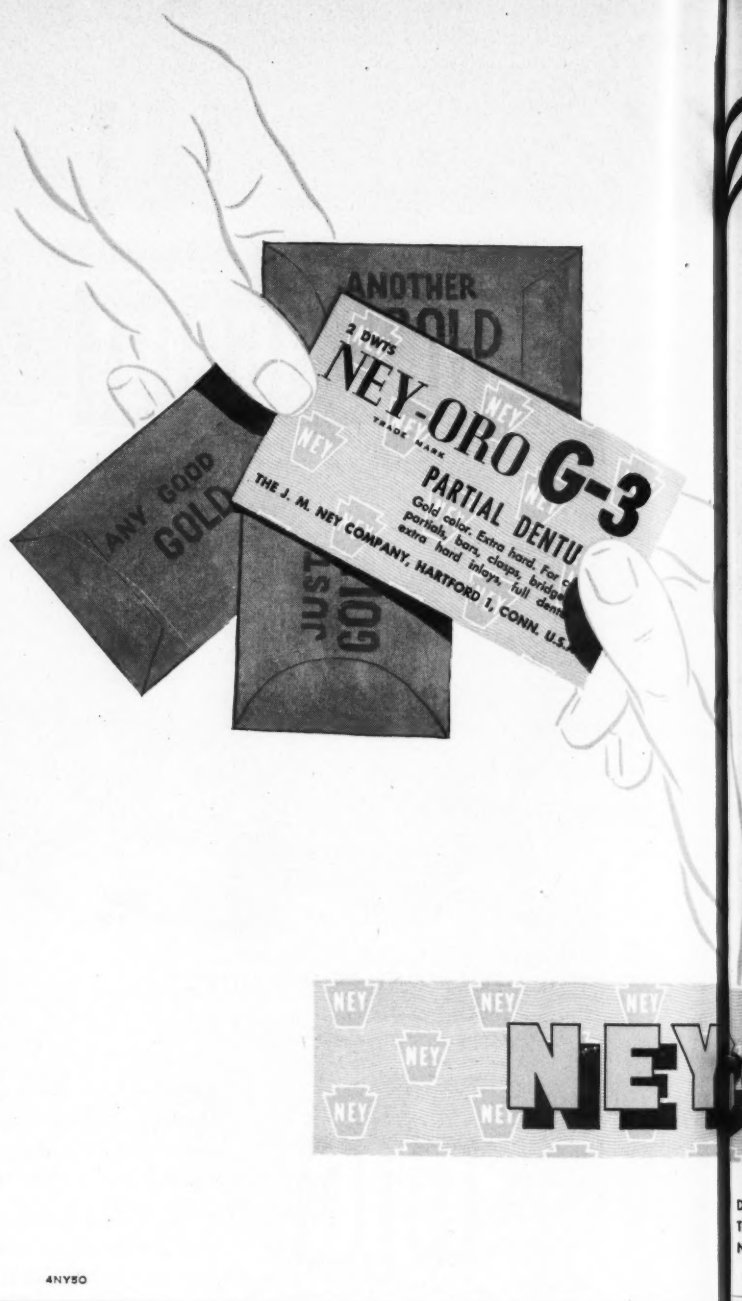
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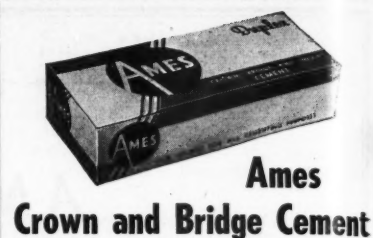
*Contra-
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The Plight of Public Speaking

Our British colleagues are faced with the same woeful lack of public speaking skills as we are in this country. Those of us who think that all educated Britishers speak in the clipped accents of Ronald Colman or in the studied hesitancy of Winston Churchill are a little surprised to learn that even in England there is slovenly and poorly planned public speaking.

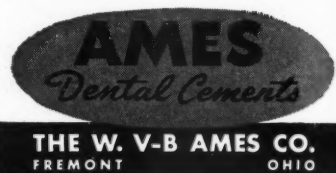
The following lament recently appeared in the *British Medical Journal*: "One accomplishment which the prospective doctor should seek after,



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and which need not add to the burden of the curriculum, is the ability to speak in public—to give clear and succinct expression to his ideas in a company of his fellows. He will probably find it easiest to acquire this ability in a debating society or similar body, for it is more a matter of cultivation than of natural endowment. The level of public speaking in the medical profession is lower than in the professions of law and teaching and in the Church and the Civil Service. It is below the level which used to obtain in medical societies, whose old members, accustomed as they were to deliberate speech, with a slight polish on it, would be aghast at the slovenliness prevailing today. There are outstanding exceptions, but in general the standard of speaking in medical assemblies—scientific, business, or social—has deteriorated. Discussions are casual and conversational, speech is slipshod, articulation is disregarded. It is a refreshment to find a speaker who has not only something to say but a way of saying it, a sense of phrase and structure, with sen-

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CLINICAL AND LABORATORY SUGGESTIONS

(See pages 544 and 545)

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor

DENTAL DIGEST
708 Church Street
Evanston, Illinois

From: _____

Subject: _____

Explanation of Procedure:

Sketch:

Suggestions submitted cannot be acknowledged or returned.

\$10 will be paid on publication for each suggestion that is used.

tences that do not lose their way in parenthesis.

"In Plutarch's *Lives* it is told of Demosthenes that he claimed he was a good member of the democratic State because he always came prepared to the rostrum; he held that such preparation was a mark of respect to the people he addressed. The medical profession does not need a Demosthenes; but some preparation before speaking, some attention to form, is, after all, a courtesy to the audience, as well as a way of impressing the speaker's ideas not only upon others but upon his own mind. This is not the unimportant frill that some may suppose. The doctor, especially in a small community, will probably be called upon to take a lead in public affairs, which will bring him occasionally to the platform. He may also be expected to take a part in the meetings of his profession, and the ability to put his points so that they can be comprehended by the slower-witted and the partially deaf will be a recommendation. From time to time he will go into the witness-box, and in court a habit of clear statement will serve him well. It is the young doctors and research workers, full of knowledge of their subject, who should be particularly on guard against incoherence. Some of the older men, brought up in a different tradition, are less prone to be glib and diffuse—both more audible and more comprehensible. Their example is one which the eager young speaker should follow."

In looking back over countless hours spent in the hard chairs at the meetings of professional societies it seems that we here in the United States are in the same plight as our British colleagues. Our young men in dentistry, medicine, and the biologic sciences are better trained, but perhaps not better educated, than their fathers and grandfathers. The young men know the minutiae and the details of their subject, most of them have a baccalaureate degree in addition to their professional degree, but their speech reflects no cultural impact. In listening to some of our young "doctors" we have the feeling that they spent so much time in their specialty

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"Accident Damage Suits Can Break You," warns Harold J. Ashe. The chance of being the defendant in an accident suit is greater than you may think. It will pay every dentist to read this article and check the specific sources of danger the author points out. You'll be looking at your building from sidewalk to cornice, at your rugs, floors, and steps, but this inspection may save you an expensive lawsuit later on.

★ ★ ★

"Income Tax Questions"—Again it's time to fill out the forms, and again you'll be wishing someone would answer your specific questions. While we can't be sure of each individual dentist's problems, we've se-

lected 37 of the most-likely-to-be-asked questions and answered them in an authoritative article.

★ ★ ★

"More Room and Less Wear"—A dental patient, analyzing his reluctance to seek dental treatment comes to a rather surprising conclusion about the effect of the physical office layout on apprehensive patients. He makes some suggestions which should be interesting to every dentist.

★ ★ ★

Doctor Fred C. Scherman combines modern dental treatment and instruction with his work of Christian missionary in Japan. While preparing for the ministry, Doctor Scherman practiced dentistry in Oak Park, Illinois, and has a host of friends in this country who are helping him in his unique work by sending gifts for the support of his Tokyo Christian Dental Clinic.

★ ★ ★

Dental caries is the most common disease among young adults—96% of the new GIs have dental debilities! A discussion of the possibility of conducting a major research program to determine the cause and possible control of dental disease is stressed in this month's editorial.

★ ★ ★

As usual in December, Oral Hygiene publishes an annual index to help you use your file of the 1950 issues of the magazine.

There are also pictures, features, short items, and all of the regular monthly departments.

that they never read a book or exposed themselves to the cultural riches that lie outside their specialty.

I recall some of the mighty men in dentistry's past and their vigorous and well-organized methods of expression. This list would include Don Gal-
lie, C. N. Johnson, Edwin Darby, Frederick Moorehead, Edmund Noyes, and Truman Brophy. None of these men had the fancy and expensive training that young men receive today. One has the feeling, though, that they recognized the limitations in their formal education and made a strenuous effort to supplement their education by out-of-classroom study.

I am continually aghast when speaking to my friends in the professional fields of medicine, law, engineering, and dentistry to find what little interest they have in subjects that lie outside their fields of special interest. Not only are they unfamiliar with the great masterpieces of literature but they are unaware or uninterested in the contemporary culture. Even the worthies in Holy Orders are known to be careless in the manner and content of their speech.

No one would expect the professional man to be a polished orator; that in itself is a specialty. Nor do we wish to hear our dental society speakers express themselves in the unctuous tones of the radio announcer. We ask for sincerity of expression, directness, and a reasonable amount of preparation. To be poorly prepared is an affront to the intelligence of an audience. To mumble and "ahem" makes any audience restless and itching for the exits.

The newspapers the other day carried a story of the regional speech habits in the United States. No section of the country was exempt. Here is an example of the ratings:

"The most sloppy speech in the country is heard in Brooklyn, a survey by the Linguaphone Institute of America reported today.

The institute placed these four other cities in the sloppy speech category:

Ypsilanti, Michigan—Folks just don't seem to care about their speech.

Atlanta, Georgia—Its speech patterns are typical of the lazy south.

Chicago, Illinois—Most people sound like they are either being chased by gangsters or are running for trains.

Hollywood, California — They sound as if they are talking with hot potatoes in their mouths."

Good speech—clear, direct, and understandable—should be of interest to dentists because speech has its beginning in the tissue of the mouth. The tongue, the palate, the dental structures are involved in speech as well as organs in the throat, chest, and nervous system. We probably have not given enough consideration to the mechanics of speech as related to dental structures and dental replacements. Naturally we cannot alter sloppy speech habits by corrections in the mouth. Careless speech is "infectious" in a community and among individuals.

There are two aspects of speech that we must keep in mind—the content and the method. Content means that we have something to say and method suggests that we know how to say it. We may have either one without the other. The specialist may have the potential content but he often has made no effort to give the subject unity and coherence. He has made no effort to develop a smooth continuity of thought and leaps from one subject to another with carefree and confusing transitions. We often pigeonhole him by saying "he knows his subject but can't present it." Frequently this is a charitable evaluation. If we know anything we should be able to present it so an intelligent child can understand. Larding a speech with highfalutin' words and references does not mean that a person knows the subject. It may be window dressing to hide his ignorance.

The first requirement, then, for speech making, is preparation. Preparation does not necessarily mean sitting down and preparing a full and complete manuscript nor even developing a written outline, although both these methods are desirable. It does mean organizing material in a logical sequence.

The method of speech is a dramatic talent. Some people possess the skill

to command attention even when the speech content is weak. The political orator is an example of one who says nothing but says it eloquently. When we come away from such a speech and probe our minds we find that nothing remains with us after the speaker's

voice is muted and his gestures stilled. Hot air that is suddenly chilled is a good description of this kind of speech.

All of us are guilty of talking without prior thought, of tongue wagging (Continued on page 560)

HYGIENIC STOPPING IS DIFFERENT HYGIENIC STOPPING IS BETTER!

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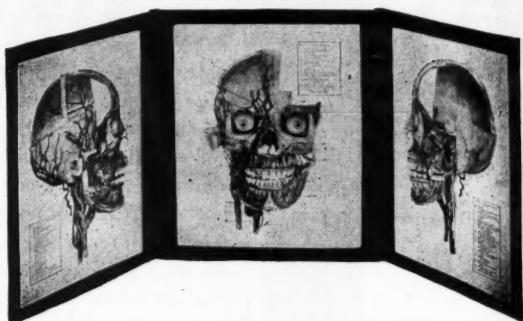
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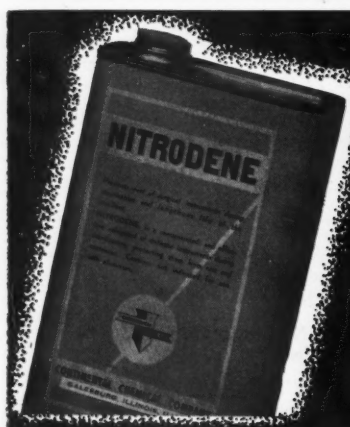
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(Continued from page 557)

without much celebration. We gab to be social, to relieve the oppression of silence, to set the airways in motion, to please our own ears. Any cocktail party gives a good example of this kind of talk. But no harm is done because people are there to relax and not be filled with knowledge or inspiration. There is certainly a place for "small" talk. It is quite a different thing, however, when we expend time, energy, and money to go to a meeting that we expect to be productive of ideas and find the speaker poorly prepared or weak in presentation—or both.—E. J. R.

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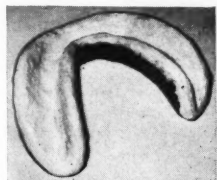
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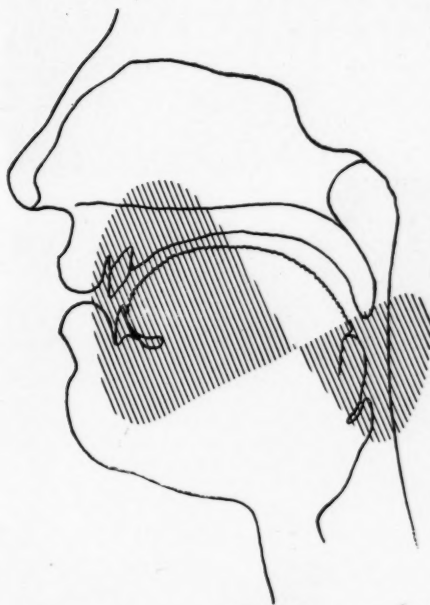
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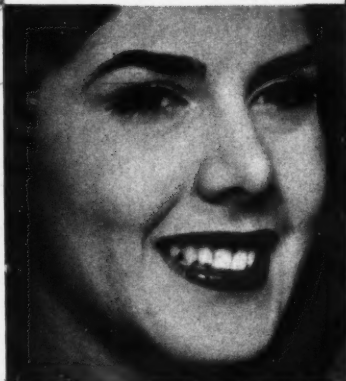
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Cuspids A85, Lower — Mould 2N
All in shade 66.



A TRUBYTE NEW HUE DUPLICATE
of this patient's natural teeth:
Centrals 1R, Laterals 324, Cuspids 1Y
Lowers — Mould 44
Shade 62 was an accurate match.



A TRUBYTE NEW HUE DUPLICATE
of this patient's natural teeth:
Centrals 3R, Laterals 1R, Cuspids
Lowers — Mould 3P
All in shade 60.



A TRUBYTE NEW HUE DUPLICATE
of this patient's natural teeth:
Centrals 155, Laterals 156,
Cuspids 156, Lower — Mould 3C
All in shade 66.



A TRUBYTE NEW HUE DUPLICATE
of this patient's natural teeth:
Centrals 266, Left Lateral 266
Right Lateral 3R, Cuspids 266
Lowers — Mould 34
Shade 60 was an accurate match

With **TRUBYTE NEW HUE® TEETH**

it's so easy to duplicate Nature

With Trubyte New Hue Teeth you can frequently provide patients with restorations that are more attractive than their natural teeth.

Or whenever it is indicated, you can actually duplicate the form, size, shade and arrangement of the patients' natural teeth.

There's an appropriate shade for every age and complexion in the

TRUBYTE NEW HUE®

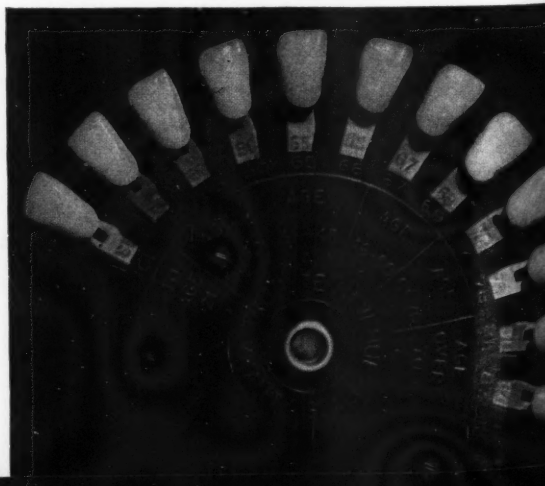
Vitality Scale

Only three rules to follow

1. Note the age of the patient.
2. Note the complexion of the patient.
3. With blondes, refer to the shades in an earlier age group when the recommended shades do not seem appropriate. Definite brunettes may be better served by reference to the next older age group.

One Shade Guide is all you need for Porcelain and Plastic Teeth

THE DENTISTS' SUPPLY COMPANY OF N. Y.



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STUDY 1

VIDEO

SPOTS